

35. (New) The process according to Claim 34, wherein, in the general formula 1, R¹ is a hydrogen atom.

36. (New) The process according to Claim 33, wherein the alkenyl group in the polymer (I) is not activated by any of a carbonyl group, an alkenyl group and an aromatic ring each conjugated with the carbon-carbon double bond thereof.

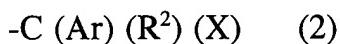
37. (New) The process according to Claim 33 wherein the alkenyl group in said polymer (I) is located at a terminus of the polymer (I).

38. (New) The process according to Claim 33, wherein the polymerization system to which the polymer (I) is to be added is a living radical polymerization system.

39. (New) The process according to Claim 38, wherein the living radical polymerization system is an atom transfer radical polymerization system.

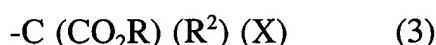
40. (New) The process according to Claim 39, wherein the polymer (I) has a group capable of serving as an initiator group for atom transfer radical polymerization, and the product block copolymer is a multiblock copolymer.

41. (New) The process according to Claim 40, wherein the group in polymer (I) which is capable of serving as an initiator group for atom transfer radical polymerization is represented by the general formula 2:



wherein Ar is an aryl group, which may optionally have a substituent, R² is a hydrogen atom or a hydrocarbon group containing 1 to 20 carbon atoms and X is chlorine, bromine or iodine.

42. (New) The process according to Claim 40, wherein the group in polymer (I) which is capable of serving as an initiator group for atom transfer radical polymerization is represented by the general formula 3:



wherein R² is a hydrogen atom or a methyl group, R is an organic group containing 1 to 20 carbon atoms and X is chlorine, bromine or iodine.

43. (New) The process according to Claim 41, wherein, in the general formulae 2 and 3, R² is a hydrogen atom.

44. (New) The process according to Claim 39, wherein the metal complex to serve as a catalyst for atom transfer radical polymerization is a copper, nickel, ruthenium or iron complex.

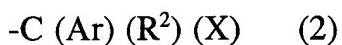
45. (New) The process according to Claim 44, wherein the metal complex to serve as a catalyst for atom transfer radical polymerization is a copper complex.

46. (New) The process according to Claim 38, wherein the monomer to be polymerized in the living radical polymerization system is a (meth) acrylic monomer.

47. (New) The process according to Claim 33, wherein the polymerization system to which the polymer (I) is to be added is a living cationic polymerization system.

48. (New) The process according to Claim 47, wherein the polymer (I) has a group capable of serving as an initiator group for living cationic polymerization and the product block copolymer is a multiblock copolymer.

49. (New) The process according to Claim 48, wherein the group in polymer (I) which is capable of serving as an initiator group for living cationic polymerization is represented by the general formula 2:



wherein Ar is an aryl group, which may optionally have a substituent, R² is a hydrogen atom or a hydrocarbon group containing 1 to 20 carbon atoms and X is chlorine, bromine or iodine.

50. (New) The process according to Claim 33, wherein the polymer (I) is produced by controlled radical polymerization.

51. (New) The process according to Claim 50, wherein the polymer (I) comprises a vinyl polymer produced by atom transfer radical polymerization.

52. (New) The process according to Claim 51, wherein the polymer (I) is produced by atom transfer radical polymerization using an alkenyl-containing initiator.

Su 53. (New) The multiblock copolymer according to Claim 52, wherein the polymer (I) is produced by using an allyl halide as an initiator.

54. (New) The process according to Claim 33, wherein the polymer (I) is produced by living cationic polymerization.

55. (New) The process according to Claim 54, wherein the polymer (I) produced by living cationic polymerization is selected from the group consisting of styrenic polymers, isobutylene polymers, polyether polymers and vinyl ether polymers.

56. (New) The process according to Claim 33, wherein the polymer (I) is a vinyl polymer.

57. (New) The process according to Claim 33, wherein the polymer (I) is a polyolefin polymer.

58. (New) The process according to Claim 33, wherein the polymer (I) is a hydrocarbon polymer.

59. (New) The process according to Claim 33, wherein the polymer (I) is a polyester polymer.

60. (New) The process according to Claim 33, wherein the polymer (I) is a polyether polymer.

61. (New) The process according to Claim 33, wherein the polymer (I) is a polysiloxane polymer.

62. (New) The process according to Claim 33, wherein the polymer (I) has a glass transition point not lower than 25°C and the polymer chain newly produced by atom transfer radical polymerization with the addition of polymer (I) has a glass transition point not higher than 25°C, or the polymer (I) has a glass transition point not higher than 25°C and the polymer chain newly produced by atom transfer radical polymerization with the addition of polymer (I) has a glass transition point not lower than 25°C.

R E M A R K S

Claims 33-62 are now in the application.